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ABSTRACT

This study investigated the feasibility of using only the McCracken Word List (MWL), a subtest of the Standard Reading Inventory (SRI), rather than the entire SRI to determine functional grade placement in reading. The MWL is one of the few word lists with well-documented reliability and validity. In addition, the MWL has been shown to be highly correlated to other widely used word lists. It was hypothesized that a significant correlation existed between word recognition test results and extended reading as required in the SRI, that all functional levels could be predicted from the word recognition test results, and that functional reading estimates could be made from word recognition test results. Testing of the 146 elementary grade students indicated that a significant relationship existed between SRI and MWL scores. Consequently, a rule of thumb was suggested for estimating reading levels from MWL scores alone. (TO)

FUNCTIONAL READING LEVELS: FROM GRADED WORD LISTS?

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ABSTRACT

This study investigated the relationship of functional grade placements derived from a full-scale informal inventory, the Standard Reading Inventory (SRI), and grade placements derived from the Word List (WL) alone.

One hundred forty-six students in grades one through six were tested. Multiple regression analysis indicated a high relationship between the SRI and MWL and consequently a rule of thumb was suggested for estimating reading levels.

FUNCTIONAL READING LEVELS: FROM GRADED WORD LISTS?

BACKGROUND

Graded word lists are commonly used to match students with instructional materials. Word lists such as the San Diego Quick Assessment (La Pray and Ross, 1969), the Graded Word Reading Test (Schonell, 1966), and the Dolch Basic Sight Word Test with McBroom, Sparrow & Eckstein criteria (Zintz, 1972) result in grade levels or book levels. Furthermore, informal reading inventories such as the Standard Reading Inventory (McCracken, 1966), the Classroom Reading Inventory (Silvaroli, 1969) and others utilize graded word lists as starting level guides for oral and/or silent paragraph reading.

The existence and utility of these instruments suggests a close relationship between scores on graded word lists and functional reading performance. If this assumption is justified, may functional reading levels be accurately estimated from word reading tests?

This study sought to answer the questions: May functional reading levels (independent, instructional, frustration) be predicted from word recognition tests? If so, how accurately do they predict these levels?

In particular, this study investigated the feasibility of using the McCracken Word List (MWL), a subtest of the Standard Reading Inventory, since it is one of few with adequately documented reliability and validity (McCracken, 1963). MWL results have also been shown to be highly correlated to other widely used word lists, although the absolute placement may vary significantly among tests (Froese, 1971).

HYPOTHESES

1. There is a significant correlation between word recognition test results and extended reading as required in the Standard Reading Inventory.

2. All functional levels--independent, instructional, frustration--may be predicted from the word recognition test results.

3. Alternate scoring procedures for the word recognition tests will result in higher predictive validities.

4. Functional reading estimates may be made from word recognition test results.

SAMPLE

The 146 subjects in this study were enrolled in a campus school in Washington State. A full range of IQ's slightly skewed toward the upper end was represented with a mean of 118 on the California Test of Mental Maturity. Grades one through six were represented (Gr. 1, N=25; Gr. 2, N=24; Gr. 3, N=25; Gr. 4, N-25; Gr. 5, N=23; Gr. 6, N=24).

METHODOLOGY

The word list and reading level results of 146 individually administered SRI's were analyzed to give the following information:

1. Independent reading level
2. Minimum instructional level
3. Maximum instructional level
4. Frustration level
5. Number of words correct on each grade level list attempted
6. Grade level at which testing was terminated (or cut-off)
7. Sum of correct responses to cut-off

Weighted scores were assigned to the commonly used book levels for purposes of statistical analysis:

PP = 1.1	1st = 1.7	3-1 = 3.2	5th = 5.5
P = 1.4	2-1 = 2.2	3-2 = 3.7	6th = 6.5
	2-2 = 2.7	4th = 4.5	7th = 7.5

ANALYSIS AND FINDINGS

The data were key-punched and submitted to a step-wise multiple regression program which resulted in the following matrix (rounded to three-decimal places).

TABLE 1

CORRELATION MATRIX FOR DEPENDENT AND INDEPENDENT VARIABLES. N = 146

	Ind.	Min. Inst.	Max. Inst.	Frust.	Cut-Off Level
Sum to Cut-off	.837	.857	.922	.930	.978
Cut-off Level	.825	.822	.878	.925	

Hypothesis #1 may be tested by referring to TABLE 1. It can be seen that cut-off levels (the point at which word list reading is terminated according to SRI instructions) are highly related ($\rho < .01$) to all functional reading levels. Correlations range from .825 to .925.

Again, referring to TABLE 1, one may examine Hypothesis #2. When word list cut-offs are considered in relationship to individual levels, it is noted that each correlation is significantly different from zero.

To test the third hypothesis it is necessary to use a statistical procedure (McNemar, 1969) which takes into account the fact that sum to cut-off and cut-off level are correlated. Since the maximum instructional level is the most important level for classroom teachers, the two coefficients (for the two scoring systems) were compared. It is noted that sum to cut-off is correlated .922 with maximum instructional level and .878 with cut-off level. When the difference of these two scores is tested by the procedure mentioned above, a t-score of 7.40 with 143 d.f. results. This difference is significant beyond the .01 level. Sum to cut-off consequently appears to be a better predictor than cut-off level.

The fourth hypothesis is somewhat more difficult to settle since comparisons are not available. That is, how closely should estimated levels

based on word lists agree with the actual reading of extended discourse before they are acceptable as estimates? TABLE 2 indicates that if one is willing to accept the true functional level plus or minus one level, one's estimate would be correct in approximately 80% (10.3% + 41.8% + 27.4%) of the cases studied.

A rule of thumb may hence be applied: Instructional Level Estimate = cut-off level - 1 level; Frustration Level Estimate = cut-off level; and Independent Level Estimate = cut-off level - 4 levels (or the lowest level on the SRI).

TABLE 2

NUMBER OF SUBJECTS PLACED ON LEVEL, ONE LEVEL TOO LOW, AND ONE LEVEL TOO HIGH WHEN: CUT-OFF LEVEL - 1 = INSTRUCTIONAL READING LEVEL ESTIMATE

	One Level Below	On Level	One Level Too High
Grade 1	2	14	8
Grade 2	1	10	9
Grade 3	1	3	10
Grade 4	4	10	3
Grade 5	5	10	6
Grade 6	2	14	4
	15/146	61/146	40/146
	10.3%	41.8%	27.4%

DISCUSSIONS AND IMPLICATIONS

Frequently it becomes necessary for the classroom teacher or reading clinician to estimate a tentative reading level for immediate instructional purposes. Under these circumstances graded word lists are often used. This study was undertaken to clarify the soundness of such a procedure.

It has been demonstrated that a highly significant relationship exists between word list reading, and reading of extended discourse. While this is

not surprising, the predictive validity for estimating functional reading levels has not been widely publicized. Furthermore, a high relationship among scores does not provide information about the calibration required. This investigation suggests that, Functional Reading Level Estimate = cut-off level - 1 level, may be an adequate criterion to use with the SRI word list until further information is gathered by the teacher to reject or confirm the tentative placement.

The above generalizations should not be extended to other word lists until their relationships to specific materials are ascertained. While various word lists result in scores that correlate moderately, the absolute grade equivalents may be significantly different (Froese, 1971).

This study also indicated that the procedure "sum to cut-off level" was a significantly better predictor of functional reading levels than cut-off level alone. However, since the ranges of scores on the word list predicting the various functional placements overlap considerably in places, it would be premature to generate a table of equivalents. At the same time, "sum to cut-off level" may be a useful measure for research purposes.

BIBLIOGRAPHY

Froese, V., "Word Recognition Tests: Are They Useful Beyond Grade Three?" The Reading Teacher, 24 (February, 1971), pp. 432-438.

LaPray, M. and Ross, R., "The Graded Word List: Quick Gauge of Reading Ability." Journal of Reading, 12 (January, 1969), pp. 305-307.

McCracken, R. A., "The Development and Validation of the Standard Reading Inventory for the Appraisal of Reading Performance in Grades 1 Through 6." Doctoral Dissertation, Syracuse University, 1963.

McCracken, R. A., Standard Reading Inventory, Bellingham: Pioneer Printing, 1966, (Now Klamath Falls, Oregon: Klamath Printing Co.)

McNemar, Q., Psychological Statistics. New York: Wiley & Sons, 1969, p. 158.

Schonell, F. J., The Psychology and Teaching of Reading. London: Oliver and Boyd, 1961, pp. 255-263.

Silvaroli, N. J., Classroom Reading Inventory. Dubuque, Iowa: Wm. C. Brown, 1965.

Zintz, M. V., Corrective Reading. Dubuque, Iowa: Wm. C. Brown, 1972, p. 60.